

Figure 1

(I) DNA sequence of FIP-yeast :

ATGTCTGATA CTGCTTGAT TTTCAGATTG GCTTGGGATG TTAAGAAGTT
GTCTTCGAT TACACTCCAA ACTGGGGTAG AGGTAACCCA AACAACTTCA
TGATACTGTT ACTTTCCCAA AGGTTTGAC TGATAAGGCT TACACTTACA
GAGTTGCTGT TTCTGGTAGA AACTTGGGTG TTAAGCCATC TTACGCTGTT
GAATCTGATG GTTCTCAAAA GGTTAACTTC TTGGAATACA ACTCTGGTTA
CGGTATTGCT GATACTAACCA CTATTCAAGT TTTCGTTGTT GATCCAGATA
CTAACAAACGA TTTCATTATT GCTCAATGGA ACTGA

(II) DNA sequence of FIP-lz :

ATGTCCGACA CTGCCTTGAT CTTCAGGCTC GCCTGGGACG TGAAGAAGCT
CTCGTTCGAC TACACCCCGA ACTGGGGCCG CGGCAACCCC AACAACTTCA
TCGACACTGT CACCTTCCCG AAAGTCTTGA CCGACAAGGC GTACACGTAC
CGCGTCGCCG TCTCCGGACG GAACCTCGGC GTGAAACCCCT CGTACGCGGT
CGAGAGCGAC GGCTCGCAGA AGGTCAACTT CCTCGAGTAC AACTCCGGGT
ATGGCATAAGC GGACACGAAC ACGATCCAGG TGTCGTTGT CGACCCCGAC
ACCAACAAACG ACTTCATCAT CGCCCAGTGG AACTAG

Figure 2

(I) Primer sequences of FIP-yeast (*Saccharomyces cerevisiae* codon) :

i. forward primer

AAAAAAA GGATCCCGCA ATGTCTGATA CTGCTTGAT

BamHI

ATGTCTGATA CTGCTTGAT TTTCAGATTG GCTTGGGATG TTAAGAAGTT GTCTTCGAT
AGGTAACCCA AACAACTTCA TTGATACTGT TACTTCCCA AAGGTTTGA CTGATAAGGC
TTTCTGGTAG AAACCTGGGT GTTAAGCCAT CTTACGCTGT TGAATCTGAT GGTTCTCAA
AACTCTGGTT ACGGTATTGC TGATACTAAC ACTATTCAAG TTTTCGTTGT TGATCCAGAT

ii. reverse primer

AAAAAAA ACACGTGTCA ACTAGTTAGT TCCATTGAGC A

PmlI

CTAGTTAGTT CCATTGAGCA ATAATGAAAT CGTTGTTAGT ATCTGGATCA ACAACGAAAA
GCAATACCGT AACCAGAGTT GTATTCCAAG AAGTTAACCT TTTGAGAACC ATCAGATTCA
ACCCAAGTTT CTACCAGAAA CAGCAACTCT GTAAGTGTAA GCCTTATCAG TCAAAACCTT
TGAAGTTGTT TGGGTTACCT CTACCCCCAGT TTGGAGTGTAA ATCGAAAGAC AACTTCTTAA

(II) Primer sequence of FIP-lz (*Ganoderma lucidum* codon) :

i. forward primer

AAAAAAA GGATCCCGCA ATGTCCGACA CTGCCTTGAT C

BamHI

ATGTCCGACA CTGCCTTGAT TTCAGGCTCG CCTGGGACGT GAAGAAGCTC TCGTTCGACT
GGCAACCCA ACAACTTCAT CGACACTGTC ACCTTCCGA AAGTCTTGAC CGACAAGGCG
CTCCGGACGG AACCTCGGCG TGAAACCCTC GTACGCGGTC GAGAGCGACG GCTCGCAGAA
ACTCCGGGTA TGGCATAGCG GACACGAACA CGATCCAGGT GTTCGTTGTC GACCCCGACA

ii. reverse primer

AAAAAAA ACACGTGTCA ACTAGTTAGT TCCCTAGTTC CA

PmlI

CTAGTTAGTT CCCTAGTTCC ACTGGGCGAT GATGAAGTCG TTGTTGGTGT CGGGGTTCGAC
ACGTGTCCGC TATGCCATAC CCGGAGTTGT ACTCGAGGAA GTTGACCTTC TGCGAGCCGT
CGTTTCACGC CGAGGTTCCG TCCGGAGACG GCGACGCGGT ACGTGTACGC CTTGTCCGGTC
AGTGTGATG AAGTTGTTGG GGTTGCCGCG GCCCCAGTTC GGGGTGTAGT CGAACGAGAG C

Figure 3

<i>Ganoderma lucidum</i>	MSDTAL I FRL AWDVKKLSFD YTPNWGRGNP
<i>Ganoderma tsugae</i>	MSDTAL I FRL AWDVKKLSFD YTPNWGRGNP
<i>Flammulina velutipes</i>	SATSLT FQL A YLVKKIDFD YTPNWGRGTP
<i>Ganoderma lucidum</i>	NNFIDTVTFP KVLTDKAYTY RAVAVSGRN LG
<i>Ganoderma tsugae</i>	NNFIDTVTFP KVLTDKAYTY RAVAVSGRN LG
<i>Flammulina velutipes</i>	SSYIDNLTFP KVLTDKKYSY RVVVNGSDLG
<i>Ganoderma lucidum</i>	VKPSYAVESD GSQKVN FLEY NSGYG I ADTN
<i>Ganoderma tsugae</i>	VKPSYAVESD GSQKVN FLEY NSGYG I ADTN
<i>Flammulina velutipes</i>	VESNF AVTPS GGQTINFLQY NKGYG V ADTK
<i>Ganoderma lucidum</i>	TIQVFVVD PD TNNDF IIAQWN
<i>Ganoderma tsugae</i>	TIQVFVVD PD TNNDF IIAQWN
<i>Flammulina velutipes</i>	TIQVFVV PD TGNSEYIIAEWKKT

Figure 4

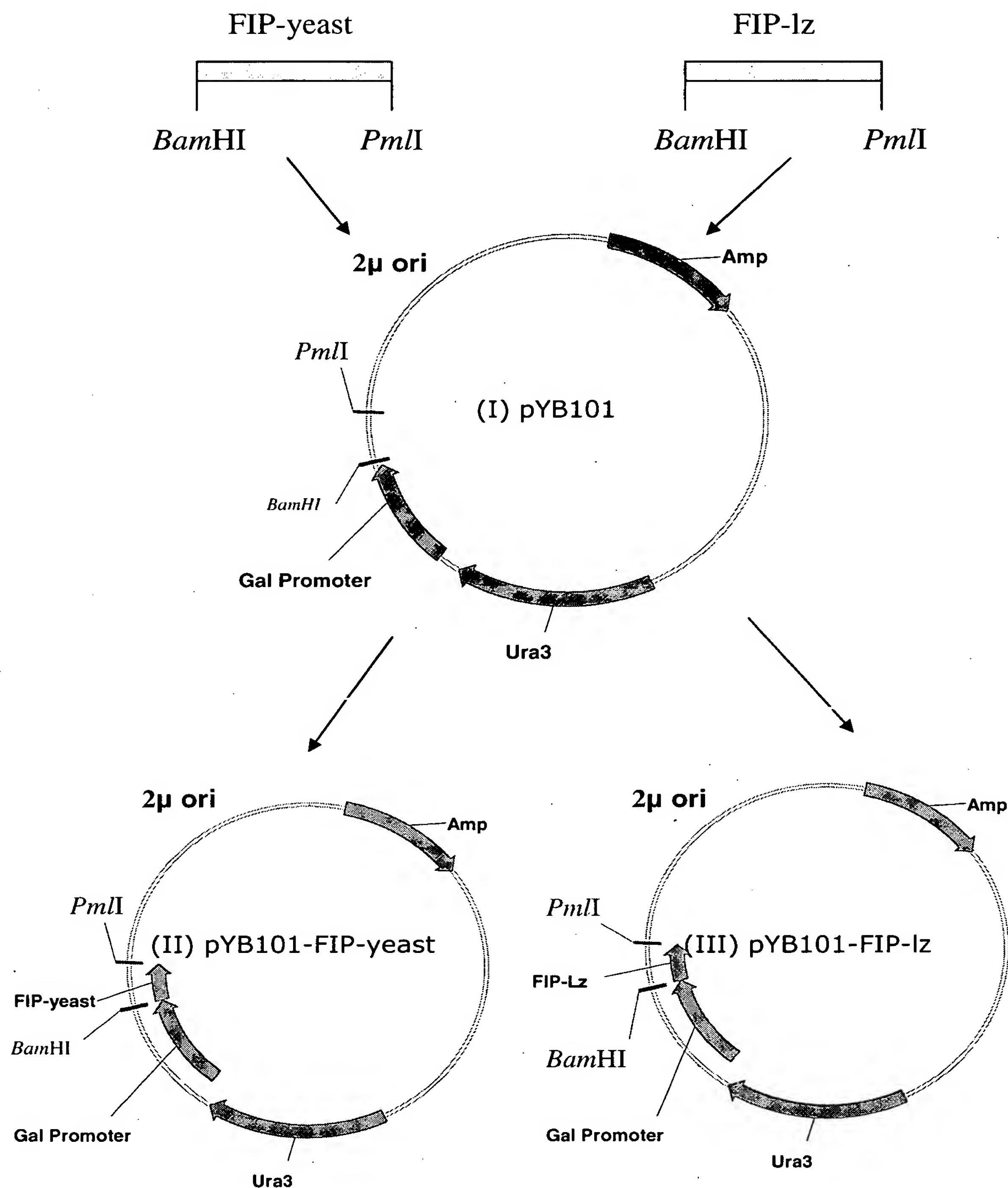


Figure 5

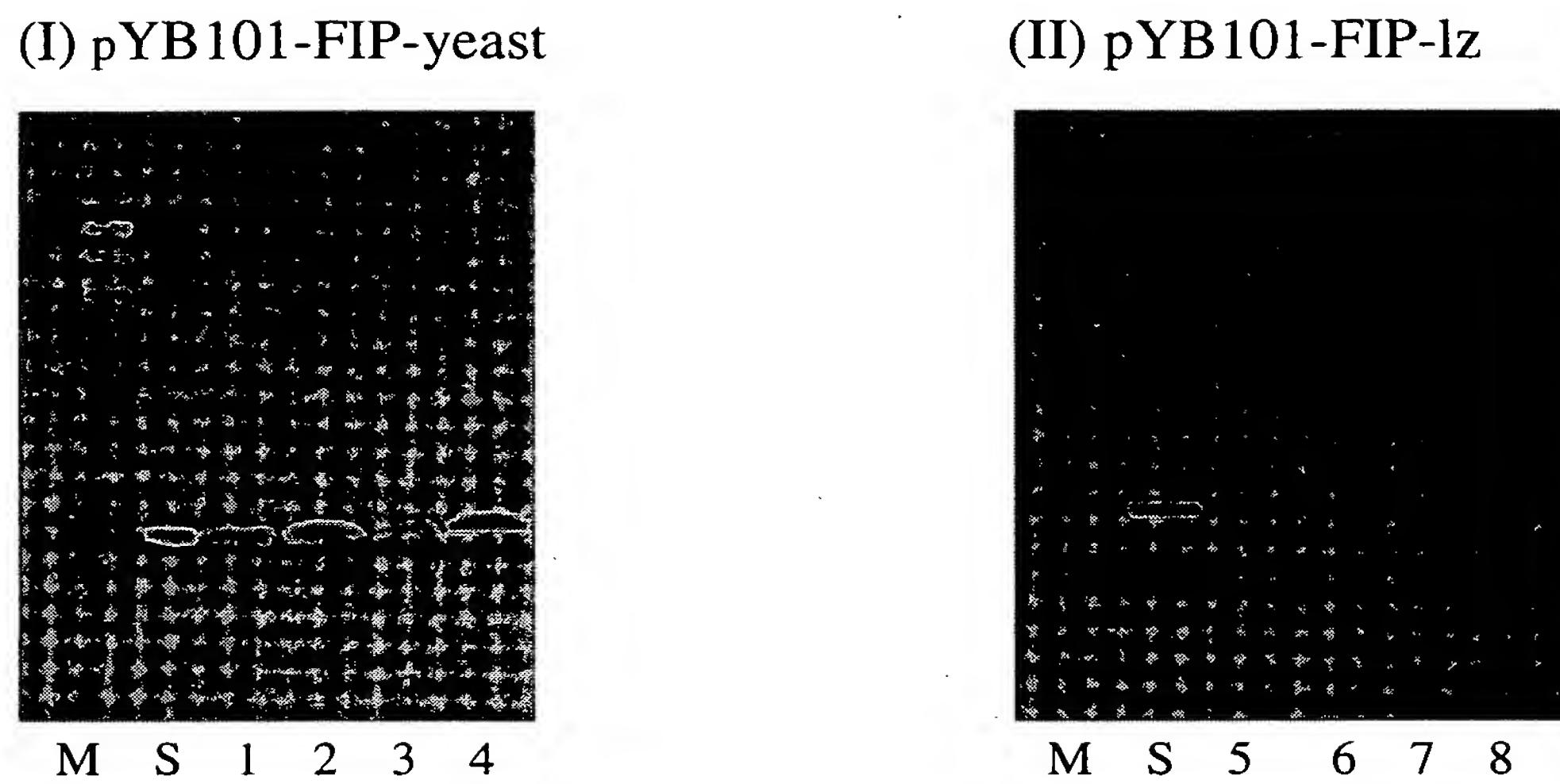


Figure 6

(I) forward primer

AAAAACTCGA GAAAAGAGAG GCTGAAGCTA TGTCCGACAC TGCCTTGAT
*Xba*I

(II) reverse primer

AAAAACACGT GTCAACTAGT TAGTTCCATT G
*Pml*I

Figure 7

<u>α-factor leader sequence</u>															
CGG	TAC	CCG	G <u>GG</u>	<u>ATC</u>	CAA	ACG	Met	Arg	Phe	Pro	Ser	Ile	Phe	Thr	
<i>BamHI</i>															
Ala	Val	Leu	Phe	Ala	Ala	Ser	Ser	Ala	Leu	Ala	Ala	Pro	Val	Asn	
GCA	GTT	TTA	TTC	GCA	GCA	TCC	TCC	GCA	TTA	GCT	GCT	CCA	GTC	AAC	
Thr	Thr	Thr	Glu	Asp	Glu	Thr	Ala	Gln	Ile	Pro	Ala	Glu	Ala	Val	
ACT	ACA	ACA	GAA	GAT	GAA	ACG	GCA	CAA	ATT	CCG	GCT	GAA	GCT	GTC	
Ile	Gly	Tyr	Ser	Asp	Leu	Glu	Gly	Asp	Phe	Asp	Val	Ala	Val	Leu	
ATC	GGT	TAC	TCA	GAT	TTA	GAA	GGG	GAT	TTC	GAT	GTT	GCT	GTT	TTG	
Pro	Phe	Ser	Asn	Ser	Thr	Asn	Asn	Gly	Leu	Leu	Phe	Ile	Asn	Thr	
CCA	TTT	TCC	AAC	AGC	ACA	AAT	AAC	GGG	TTA	TTG	TTT	ATA	AAT	ACT	
Thr	Ile	Ala	Ser	Ile	Ala	Ala	Lys	Glu	Glu	Gly	Val	Ser	Leu	Glu	
ACT	ATT	GCC	AGC	ATT	GCT	GCT	AAA	GAA	CAA	GGG	GTA	TCT	<u>CTC</u>	<u>GAG</u>	
<i>XhoI</i>															
Signal cleavage site															
Lys	Arg	Glu	Ala	Glu	Ala	Met	Ser	Asp	Thr	Ala	Leu	Ile	Phe	Arg	
AAA	AGA	GAG	GCT	GAA	GCT	ATG	TCC	GAC	ACT	GCC	TTG	ATC	TTC	AGG	
→															
FIP DNA sequence															

Figure 8

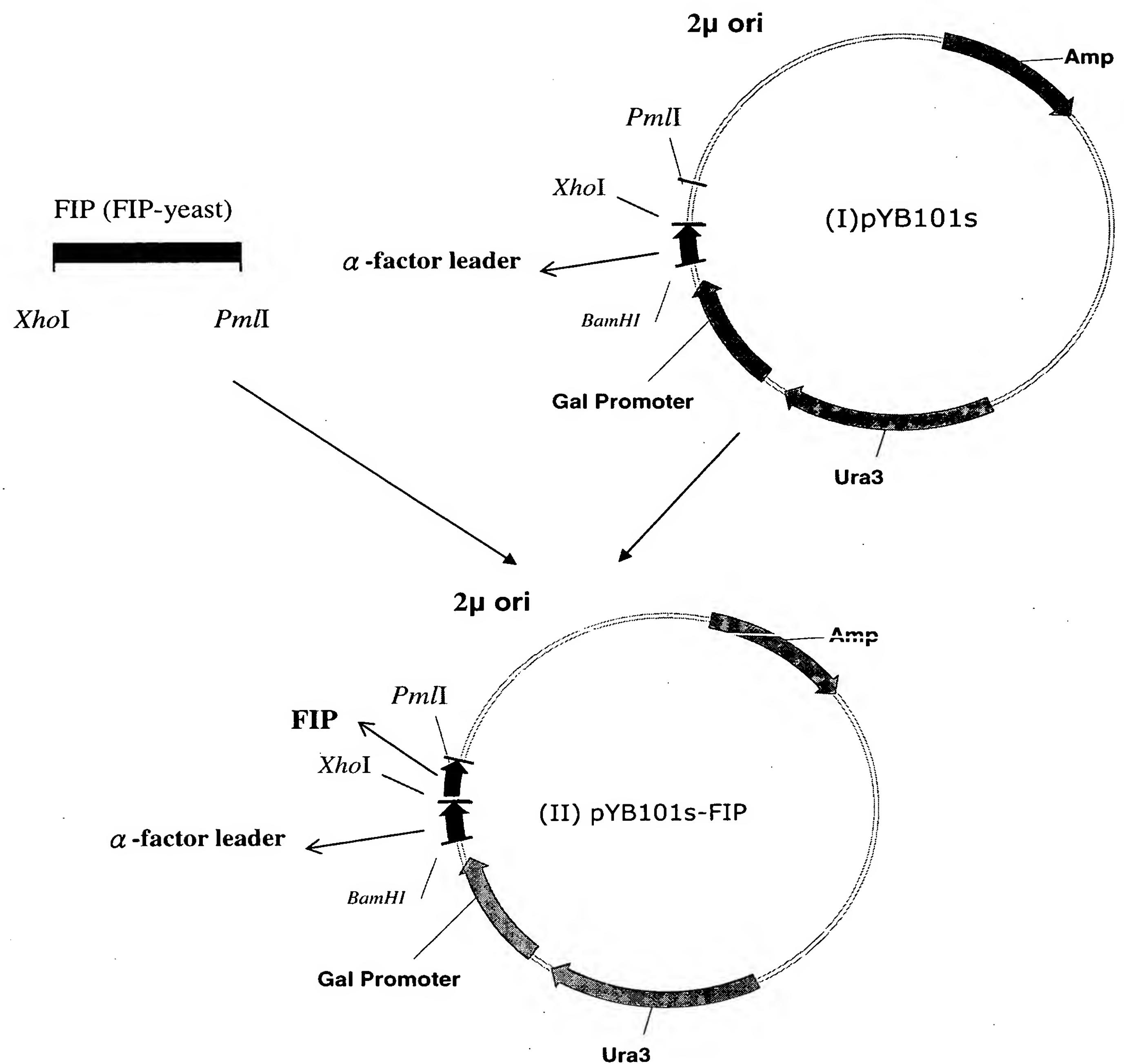


Figure 9

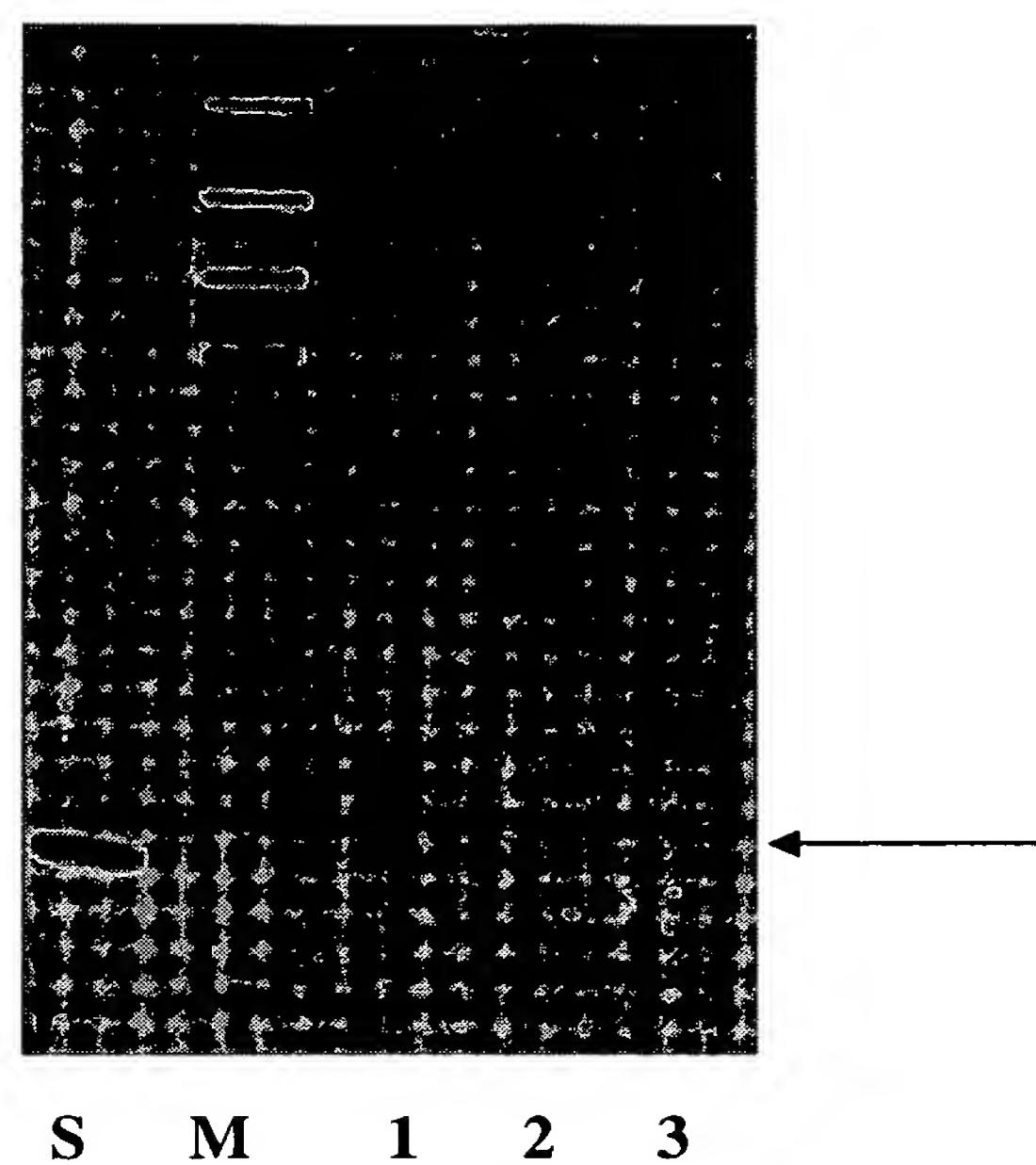
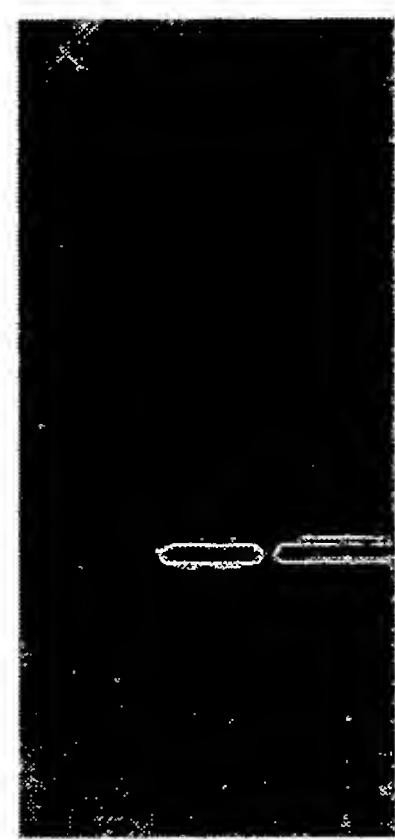


Figure 10



M S F

Figure 11

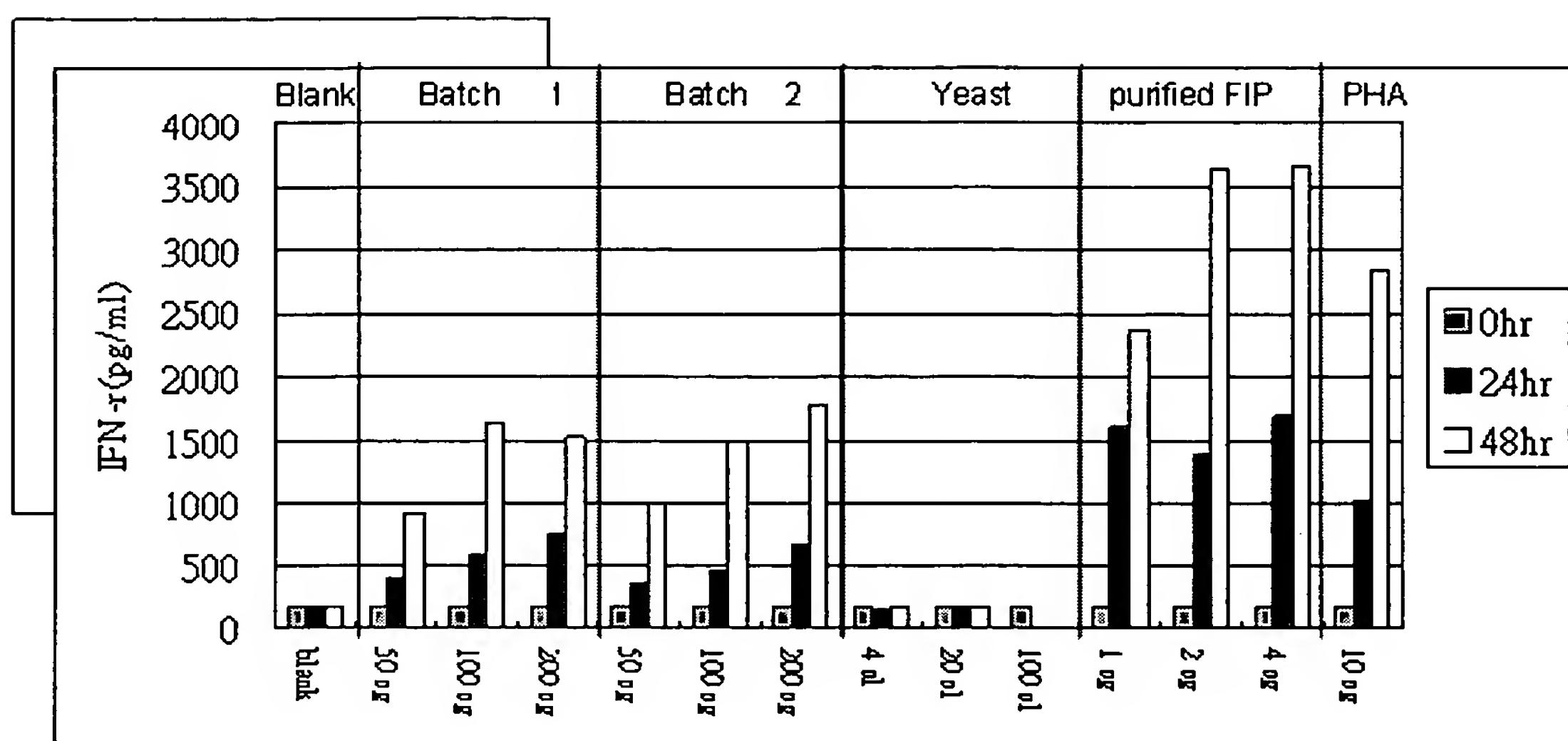
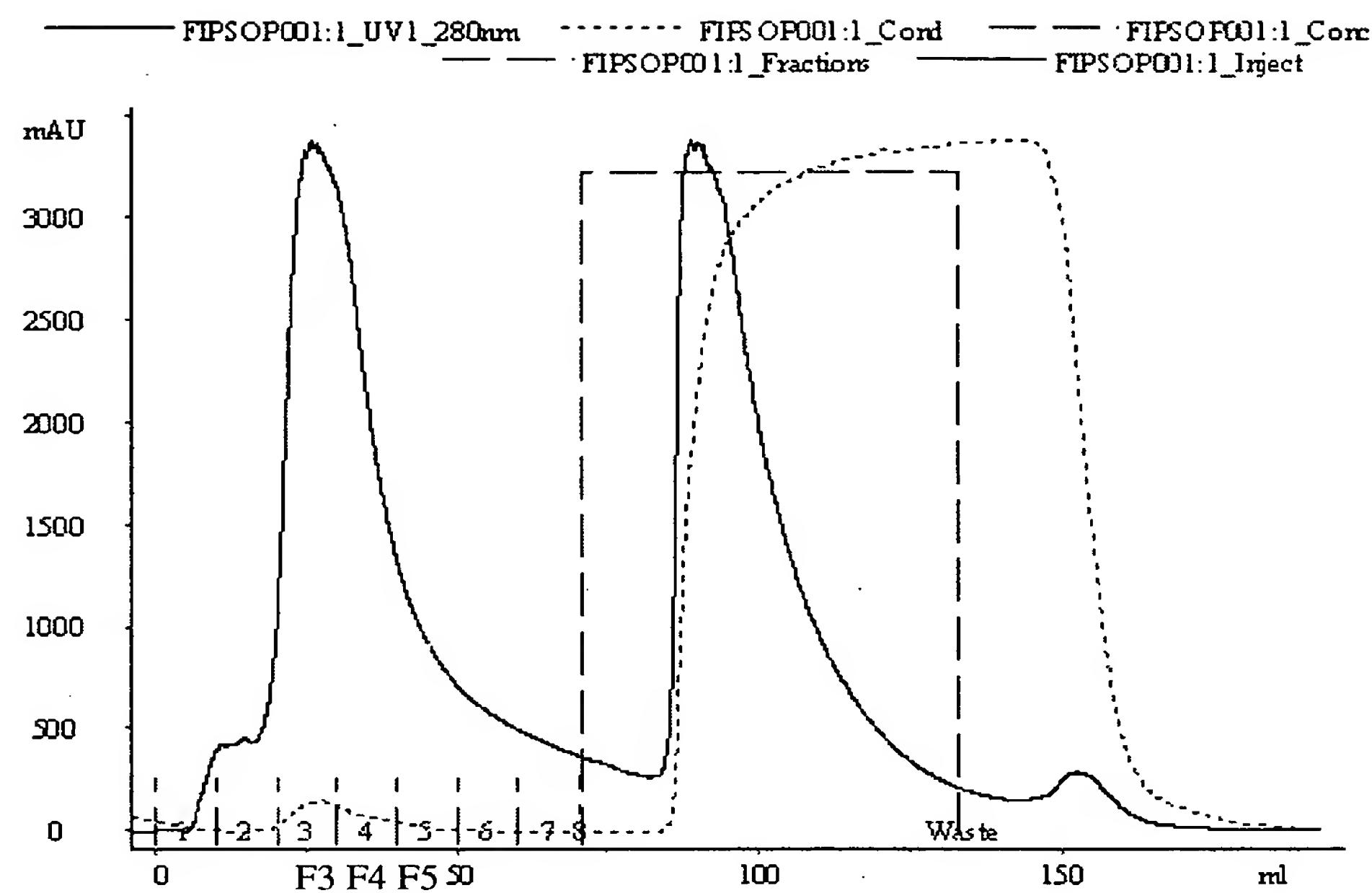


Figure 12

(I)



(II)

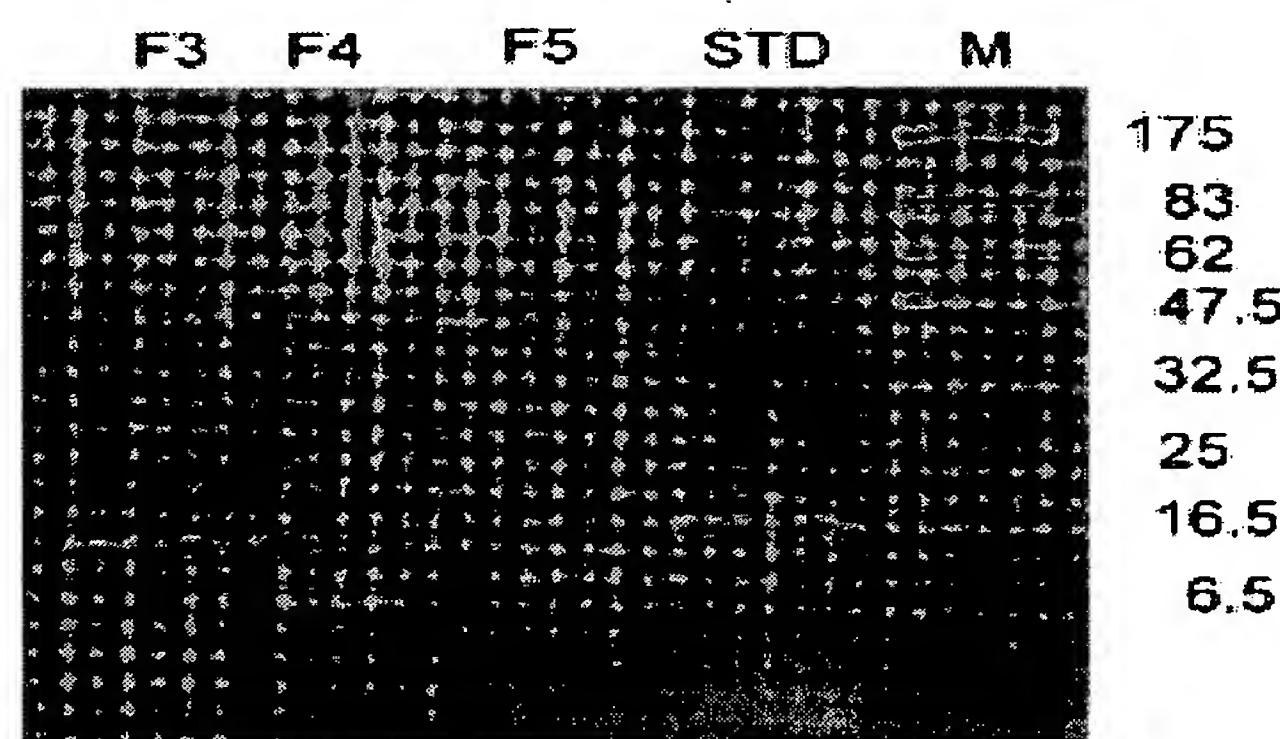


FIGURE 13

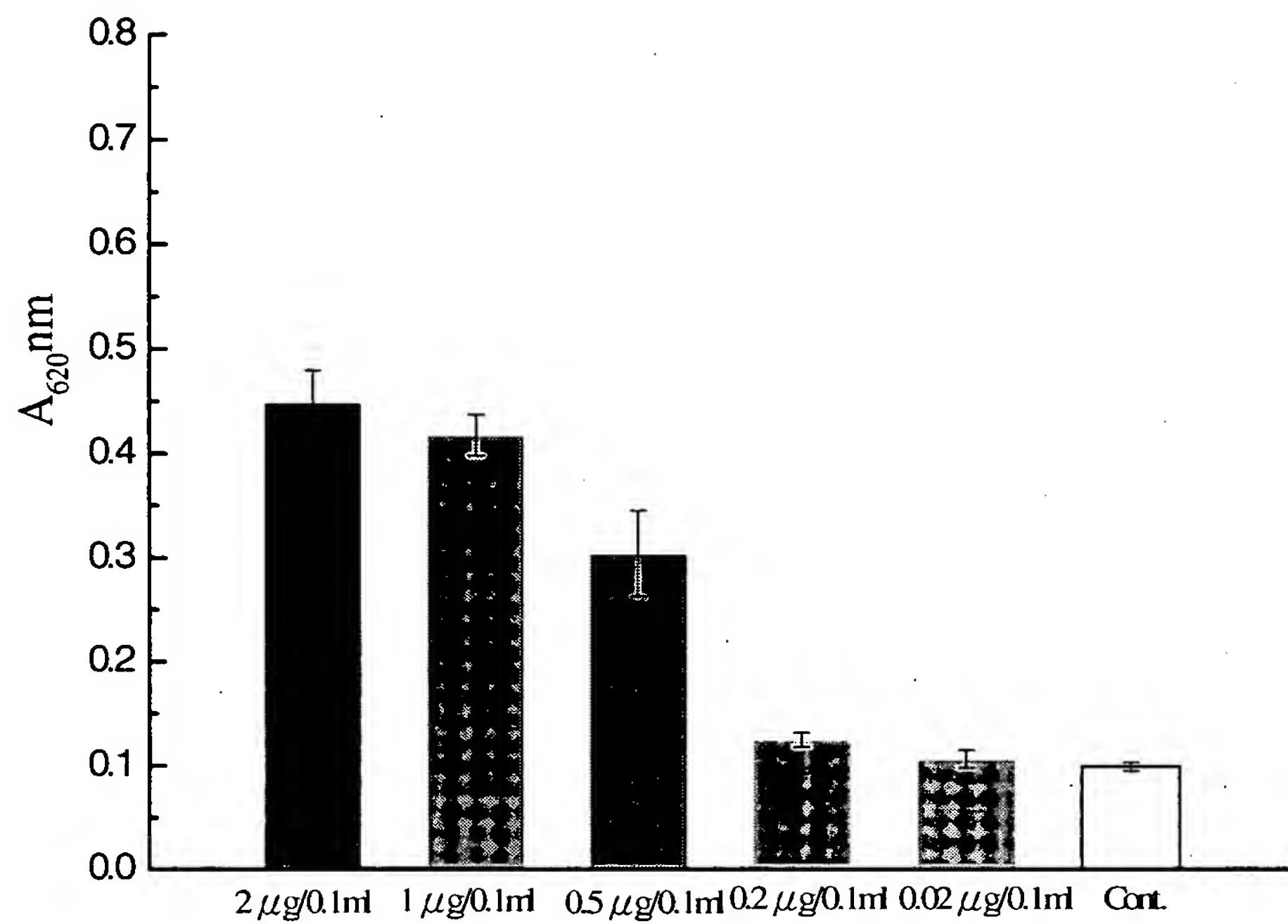


Figure 14

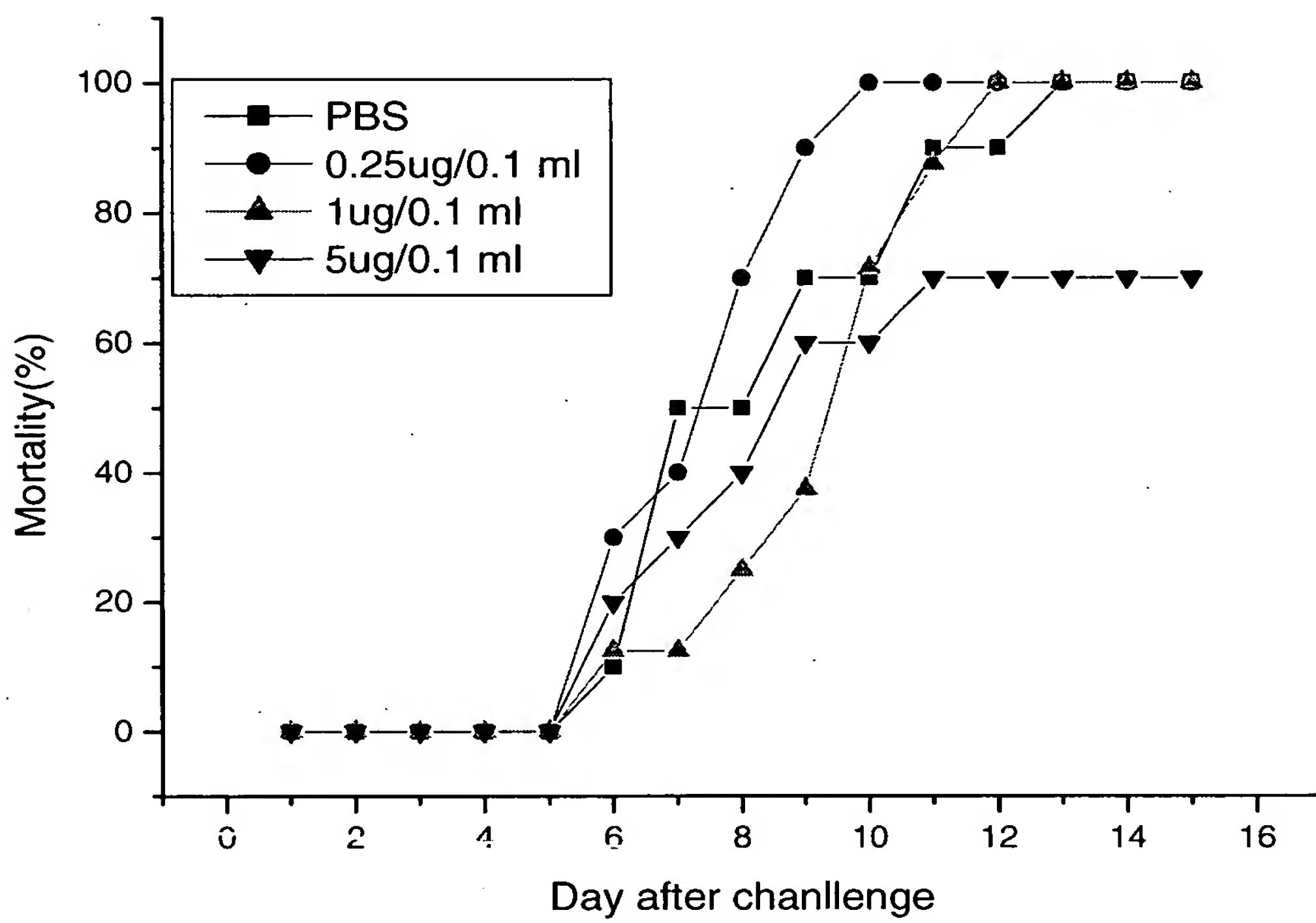


Figure 15

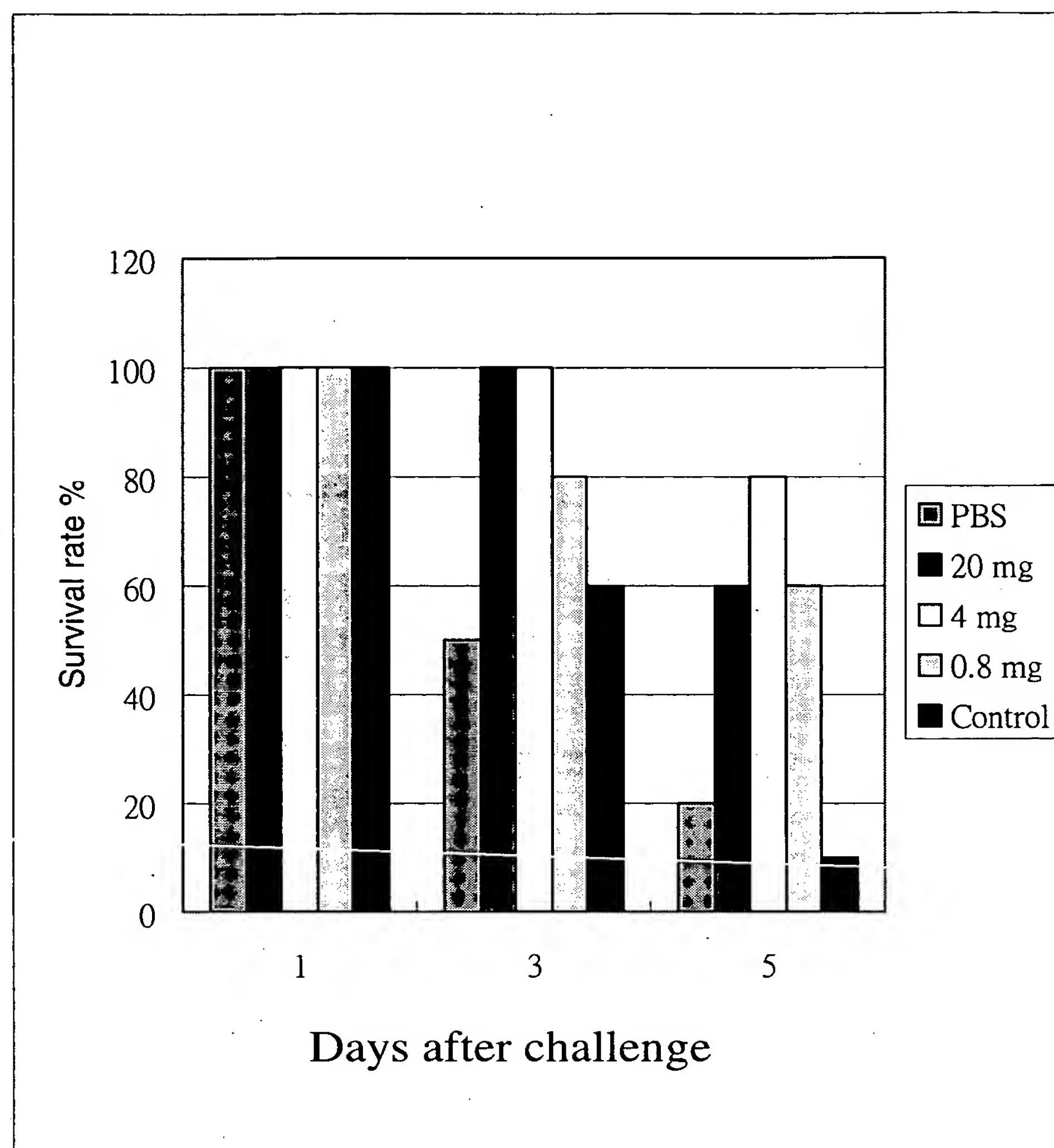


Figure 16

